

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016668**Date Inspected:** 05-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Huang min**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder( OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

BAY- 2

This QA Inspector Randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) of weld joint VP3014-001-049. Welder is identified as 058245. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4b-F.

FCAW of weld joint VP3013-001-003. Welder is identified as 045209. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4b-F.

BAY- 3

Submerged Arc Welding (SAW) of weld joint FB3272-001-026. Welder is identified as 050502. ZPMC Quality Control (QC) is identified as Mr. Zhan Hai Feng. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2221-B-L2c-S-2.

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### BAY- 6

ZPMC personnel heat straightening OBG member identified as CB3002C-018. Distortion appeared to be caused by welding of the material. ZPMC Quality Control (QC) inspector identified as Mr. Shu Yang Hua was present to monitor the heat straightening process. The heat straightening appeared to comply with Heat Straightening Report (HSR) HSR1 (B) 9268.

### BAY- 7

FCAW of weld joint X4254C-002-001. Welder is identified as 045625. ZPMC Quality Control (QC) is identified as Mr. Cui Jun Jie. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2231-TC-U4b-F-2.

FCAW of weld joint SP3145A-001-030,031. Welder is identified as 051246. ZPMC Quality Control (QC) is identified as Mr. Xu Hai Yang. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2132-3.

FCAW of weld joint SP3145A-001-020,021. Welder is identified as 051246. ZPMC Quality Control (QC) is identified as Mr. Xu Hai Yang. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2132-3.

During the QA random in process observations of the fabrication of OBG Steel Barrier (SB) W2-SB1, 5 and 6, this QA observed ZPMC has changed the joint design from fillet to Complete Joint Penetration (CJP) without the Engineers approval. The change to CJP is due to the root openings exceeding the 5mm tolerance specified in AWS D1.5 2002. The weld joints and root openings are listed below.

- W2-SB1-9.5-062 = 10mm
- W2-SB1-9.5-031 = 12mm
- W2-SB6-9-093 = 7mm
- W2-SB6-9-062 = 8mm
- W2-SB6-9-031 = 7mm
- W2-SB5-8-144 = 8mm
- W2-SB5-8-124 = 8mm

This QA Inspector generated an incident report on this date for the above issue, for further information see the incident report.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

### Comments

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Prabhu,Surendra	Quality Assurance Inspector
<b>Reviewed By:</b>	Hall,Steven	QA Reviewer

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